

Amendment Under 37 C.F.R. § 1.116
USSN 09/987,749
Attorney Docket Q67214
October 11, 2005

REMARKS

Claims 7 and 8 are all the claims pending in the application.

In the Final Rejection Claims 7 and 8 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Gellert *et al.* (US Patent 6,394,784) in view of EP 750 975 and German Patent 8620956.1. Claims 7 and 8 were further rejected under 35 U.S.C. § 103(a) as being unpatentable over EP 750 975 in view of Gellert *et al.* (US Patent 6,394,784) in view of German Patent 8620956.1.

Claim 7 is directed to a nozzle for injection moulding of plastic materials comprising a generally cylindrical body having first and second ends as opposite ends of the cylindrical body. Claim 7 further calls for first and second heating resistors wound on said external surface of the body with each of the heating resistors being disposed in a spiral-shaped groove located in said external surface of said generally cylindrical body. The heating resistors are housed in the same spiral-shaped groove in a side by side condition at the same radial distance with respect to the cylindrical body. The claim has been further amended to state that the two heating resistors in the same spiral shaped groove extend from the first end to the second end of the cylindrical body.

The US patent to Gellert et al. shows a nozzle in Figure 5 having a dual-resistor redundant arrangement wherein the two heating resistors 80 and 90 are embedded within respective dielectric layers 86 and 92 at different radial distances with respect to the cylindrical body of the nozzle. There is no disclosure whatsoever with respect to the starting and ending positions of the two heating resistors and there is no disclosure or suggestion whatsoever about

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operating each resistor independently of each other. At column 9, lines 32-36 it is merely stated that the two resistors may provide higher wattage which means that both would be simultaneously energized or that one (the “second wire element 90”) can provide operational redundancy if and when the other resistor 80 fails. Such language clearly does not suggest that the two resistors can be operated independently of each other. Even if one wire element was used should the other wire element fail the same heating results would not be achieved since the two wire elements are at different radial distances from the axis of the nozzle. The present invention as claimed clearly discloses the two heating resistors being disposed side by side in a common spiral-shaped groove so that if one heating resistor failed the other heating resistor could be activated to provide the exact same heating results since both heating resistors are at the same identical radial distance from the axis of the nozzle. The foregoing arrangement is specifically defined in Claim 7.

EP-0750975 shows a nozzle with a single heating resistor 40 within a spiral groove. There is no disclosure whatsoever of a second heating resistor whatsoever.

With respect to the two rejections, it appears to be immaterial which of the two references is the basic reference since in either case it would not be the least bit obvious to place the two resistors in a common spiral groove. With respect to the positioning of the resistors in a side by side condition whereby each resistor is at the same radial distance with respect to the cylindrical body, it is submitted that the German patent 8,620,956 fails to show such a feature. The two heating resistors 1 and 2 of the German patent are arranged in a side by side condition. However, both resistors are provided only along the axial portion of the tubular heater indicated

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as “B” in the drawing while along the end of the tubular heater designated as “A” only resistor 2 is provided. Furthermore, the German specification explicitly states that the resistor 2 is designed to produce a heating action only along the portion “A” of the tubular heating (without clarifying how this could be obtained). Along the portion “B” the heating action is provided only by the resistor 1. Accordingly, resistor 2 is depicted in the drawing along portion “A” with single section lining which according to the drawing headings means “heated area” while along portion “B” it is depicted without section lines which according to the drawing headings means “non-heated area”. Thus, even though the two heating elements of the German patent are side by side there is absolutely no disclosure for placing the heating elements in a spiral groove as called for in the claim. Furthermore, both resistors of the German reference do not extend the entire length of the tubular heater. With respect to Claim 8, the Examiner has apparently overlooked the last paragraph of Claim 8 which specifically calls for each resistor being provided with a respective autonomous thermal couple connected thereto. Therefore, the combination of references which fail to show the specifically claimed features regarding the resistors also fails to provide a respective autonomous controlled thermocouple for each resistors.

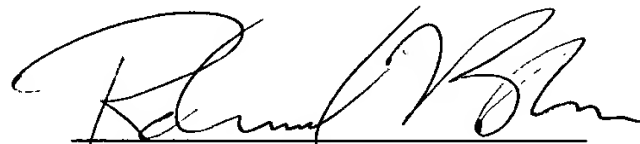
In view of the foregoing amendments and arguments with respect to the combination of references it is submitted that Claims 7 and 8 are clearly patentable over the proposed combination of references. Therefore, it is respectfully requested that Claims 7 and 8 inclusive be allowed and the application passed to issue forthwith.

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In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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